30 October 2020

Ms. Lauren Mancuso
Manager Environmental Site Remediation
Union Pacific Railroad Company
Oakland, CA 94607

CERTIFIED MAIL
7019 0700 0002 1109 5192

NOTICE OF APPLICABILITY (NOA); GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0076-01 FOR LIMITED THREAT DISCHARGES TO SURFACE WATER; UNION PACIFIC RAILROAD COMPANY, DUNSMUIR RAILYARD PROJECT, SISKIYOU COUNTY

Our office received a Notice of Intent on 21 September 2020 from Union Pacific Railroad Company (hereinafter Discharger), for discharge of treated groundwater and storm water to surface water. Based on the application packet and subsequent information submitted by the Discharger, staff has determined that the project meets the required conditions for approval under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order), Tier 2. This project is hereby assigned Limited Threat General Order R5-2016-0076-063 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002. Please reference your Limited Threat General Order number, **R5-2016-0076-063**, in your correspondence and submitted documents.

The project activities shall be operated in accordance with the requirements contained in the Limited Threat General Order and as specified in this NOA. You are urged to familiarize yourself with the entire contents of the enclosed Limited Threat General Order (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf).

CALIFORNIA TOXICS RULE / STATE IMPLEMENTATION POLICY MONITORING

The Limited Threat General Order incorporates the requirements of the California Toxics Rule (CTR) and the State Water Resources Control Board's (State Water Board), *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, 2005, also known as the State Implementation Policy (SIP). Screening levels for CTR constituents and other constituents of concern are found in Attachment I of the Limited Threat General Order.

Review of your water quality data in comparison to the screening values, showed reasonable potential for the discharge to cause or contribute to an exceedance of lead, manganese, and zinc water quality objectives in the Sacramento River, which is a water of the United States. However, the proposed treatment system addresses the water quality concern by reducing constituent(s) concentrations below water quality objectives; therefore, the Project qualifies for the Limited Threat General Order.

PROJECT DESCRIPTION

The Project is in Dunsmuir, California, in the northeast quarter of Section 25, Township 39 North, Range 4 West and is defined by a north-south oriented railroad right-of-way approximately 2,100 feet long, bordered to the west by Sacramento Avenue and to the east by the Sacramento River.

The Project is a groundwater remediation site for Bunker C fuel oil and diesel fuel that was released into the vadose zones and shallow groundwater through historic operations at the Project area. The remediation system consists of a groundwater extraction and treatment system (GWETS). The GWETS is comprised of two primary systems, an extraction system and a groundwater treatment system.

The extraction system consists of the following components:

- A subsurface interceptor trench system with a liner on the downgradient side
- Five operating collection wells CW-01, CW-02, CW-03, CW-05, and CW-07 with groundwater dewatering pumps; collection wells CW-04, CW-06 and CW-08 are no longer used due to inefficiency.
- Five operating skimmer pumps for each collection well.

The groundwater treatment system consists of the following components:

- 200,000 gallons storage tank (T-101)
- Two feed pumps
- Four sand pressure filters operating in parallel
- Two granular activated carbon (GAC) pressure vessels operating in series
- Two sand filter backwash solids drying beds
- 300-gallon recovered oil storage tank (T-104)

The influent stream into the GWETS is composed of water from the turntable sump, the maintenance vehicle wash rack, and site groundwater. Following treatment at the GWETS, treated effluent is discharged into an infiltration gallery. The infiltration gallery is located between the road and the former Engine House on the south side of the property, which shares a hydraulic connection with the Sacramento River directly to the east. The treated effluent is discharged into an infiltration gallery south of the treatment system.

Groundwater extraction rates are expected to vary between 35 gallons per minute (gpm) to 300 gpm. Lower extraction rates are required to lessen the hydraulic head of groundwater to possibly reduce underflow of groundwater and non-aqueous phase

liquid (NAPL) at the retaining wall to the Sacramento River. However, higher extraction rates are required for dewatering areas of the site during excavation and dewatering.

EFFLUENT LIMITATIONS

Effluent limitations are specified in Section V. Effluent Limitations and Discharge Specifications of the Limited Threat General Order. Based on the information provided in the NOI, effluent limitations are only required for the parameters identified in items 1-5, below:

1. **Flow (Section V.A.1.a).** The flow rate shall not exceed 0.432 MGD.

2. **pH (Section V.A.1.b.i).** The pH of all limited threat discharges within the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County) shall at all times be within the range of 6.5 and 8.5.

3. **Whole Effluent Toxicity, Chronic (Section V.A.2.a).** There shall be no chronic toxicity in the discharge.

4. **Whole Effluent Toxicity, Acute (Section V.A.3.a).** Survival of aquatic organisms in 96-hour bioassays of undiluted waste for all limited threat discharges shall be no less than:

    i. 70%, minimum for any one bioassay; and
    ii. 90%, median for and
    iii. three consecutive bioassays.

5. **Final Effluent Limitations.** The following constituents and parameters in Table 1 below have been identified as having reasonable potential to cause or contribute to an in-stream excursion from water quality objectives or technology based effluent limits and shall not exceed the effluent limitations as listed

Table 1. Final Effluent Limitations

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Limited Threat General Order Section Reference
Benzene	µg/L	--	0.5	V.B.4
Ethylbenzene	µg/L	--	0.5	V.B.4
1,2-Dichloroethane	µg/L	0.38	0.5	V.B.4
Naphthalene	µg/L	--	5.0	V.B.4
Toluene	µg/L	--	0.5	V.B.4
Di-isopropyl Ether	µg/L	--	5	V.B.4

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Limited Threat General Order Section Reference
Ethylene Dibromide	µg/L	0.05	0.10	V.B.4
Ethyl Tertiary Butyl Ether	µg/L	--	5	V.B.4
Lead, Total Recoverable	µg/L	1	2	V.A.1.g
Manganese, Total Recoverable	µg/L	80	160	V.A.1.e
Methanol	µg/L	--	20	V.B.4
Methyl Tertiary Butyl Ether	µg/L	--	1.0	V.B.4
Carcinogenic PAHs	µg/L	0.0044	0.0088	V.B.4
Tertiary Amyl Methyl Ether	µg/L	--	1.0	V.B.4
Tertiary Butyl Alcohol	µg/L	--	10	V.B.4
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	--	50	V.B.4
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	--	50	V.B.4
Xylene	µg/L	--	0.5	V.B.4
Zinc, Total Recoverable	µg/L	32	64	V.A.1.g

Table 1 Notes

1. **Carcinogenic PAHs.** Applies to the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluroanthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7Hdibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-

nitrofluorene, and chrysene.

2. **Xylene.** Applies to the sum of o-xylene, m-xylene, and p-xylene.

The Receiving Water is not listed under the Clean Water Act 303(d) List of impaired water bodies. Therefore, no additional 303(d) based effluent limitations or monitoring requirements will be added to this NOA.

RECEIVING WATER LIMITATIONS

The Limited Threat General Order includes receiving surface water limitations in Section VIII.A. Based on the information provided in the NOI, only the following receiving surface water limitations are applicable to this discharge:

- Chemical constituents (VIII.A.4)
- Color (VIII.A.5)
- Floating material (VIII.A.7)
- Oil and grease (VIII.A.8)
- pH (VIII.A.9.a)
- Toxicity (VIII.A.17)

MONITORING AND REPORTING

Monitoring and reporting requirements are contained in Attachment C of the Limited Threat General Order. The Discharger is required to comply with the following specific monitoring and reporting requirements for the effluent and receiving water in accordance with Attachment C of the Limited Threat General Order.

Monitoring Locations – The Discharger shall monitor the effluent and receiving water at the specified location as follows:

Table 2. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	INF-001	Last connection before waste enters the treatment process.
001	EFF-001	A location where a representative sample of the effluent can be collected prior to discharging to the subsurface infiltration gallery and the Sacramento River.
	RSW-001	The Sacramento River approximately 700 feet upstream of the discharge point, adjacent to the northernmost module of the train crew quarters.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	INF-001	Last connection before waste enters the treatment process.
	RSW-002	The Sacrament River approximately 500 feet downstream of the discharge point, at Butterfly Bridge

Influent Monitoring – When discharging to surface water, the Discharger shall monitor the effluent at INF-001 in accordance with Table C-2 of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 3 and subsequent Table 3 Notes:

Table 3. Influent Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	GPM	Estimate	1/Month
Benzene	µg/L	Grab	1/Month
Ethylbenzene	µg/L	Grab	1/Month
1,2-Dichloroethane	µg/L	Grab	1/Month
Lead, Total Recoverable	µg/L	Grab	1/Month
Naphthalene	µg/L	Grab	1/Month
Toluene	µg/L	Grab	1/Month
Di-isopropyl Ether	µg/L	Grab	1/Month
Ethanol	µg/L	Grab	1/Month
Ethyl Tertiary Butyl Ether	µg/L	Grab	1/Month
Methanol	µg/L	Grab	1/Month
Methyl Tertiary Butyl Ether	µg/L	Grab	1/Month
Tertiary Amyl Methyl Ether	µg/L	Grab	1/Month
Tertiary Butyl Alcohol	µg/L	Grab	1/Month
Total Dissolved Solids	mg/L	Grab	1/Month
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	Grab	1/Month
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	Grab	1/Month
Xylene	µg/L	Grab	1/Month

Table 3 Notes

1. If these constituents are not present in any monitoring well or extraction well at the cleanup site, the monitoring well documentation may be submitted in lieu of the

influent monitoring for these constituents. Confirmation samples on an annual basis shall be submitted to verify the absence of these chemicals. If three consecutive monthly influent sampling events result in non-detectable concentration, at appropriate detection limits, then the sampling frequency shall be reduced to quarterly. If three consecutive quarterly sampling events results in non-detectable concentration, at appropriate detection limits, then the sampling frequency shall be reduced to annually. If a detectable concentration is determined to be present in the wastewater, the frequency will be monthly.

2. **All parameters, except flow.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
3. If lead is not detected in the first two sampling events, then testing may be discontinued thereafter.
4. Xylene includes o-xylene, m-xylene, and p-xylene.

Effluent Monitoring – When discharging to surface water, the Discharger shall monitor the effluent at EFF-001 in accordance with Table C-3 of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 4 and subsequent Table 4 Notes:

Table 4. Effluent Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Flow	MGD	Metered	1/Day
Electrical Conductivity @ 25 ºC	µmhos/cm	Grab	1/Month
pH	standard units	Grab	1/Month
Turbidity	NTU	Grab	1/Month
Hardness, Total (as CaCO3)	mg/L	Grab	1/Month
Benzene	µg/L	Grab	1/Month
Ethylbenzene	µg/L	Grab	1/Month
1,2-Dichloroethane	µg/L	Grab	1/Month
Lead, Total Recoverable	µg/L	Grab	1/Month
Naphthalene	µg/L	Grab	1/Month
Toluene	µg/L	Grab	1/Month
Carcinogenic PAHs	µg/L	Grab	1/Month
Di-isopropyl Ether	µg/L	Grab	1/Month
Ethanol	µg/L	Grab	1/Month
Ethylene Dibromide	µg/L	Grab	1/Month
Ethyl Tertiary Butyl Ether	µg/L	Grab	1/Month

Parameter	Units	Sample Type	Minimum Sampling Frequency
Manganese, Total Recoverable	µg/L	Grab	1/Month
Methanol	µg/L	Grab	1/Month
Methyl Tertiary Butyl Ether	µg/L	Grab	1/Month
Temperature	°F	Grab	1/Month
Tertiary Amyl Methyl Ether	µg/L	Grab	1/Month
Tertiary Butyl Alcohol	µg/L	Grab	1/Month
Total Dissolved Solids	mg/L	Grab	1/Month
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	Grab	1/Month
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	Grab	1/Month
Xylene	µg/L	Grab	1/Month
Zinc, Total Recoverable	µg/L	Grab	1/Month
Acute Toxicity	% survival	Grab	1/Year
Chronic Toxicity	--	Grab	1/Year

Table 4 Notes

1. **Electrical conductivity, pH, turbidity, temperature, and DO.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
2. **All parameters, except flow.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
3. **For hardness, lead, and zinc** Monitoring for hardness shall be performed concurrently with sampling for lead and zinc.
4. **Acute and chronic toxicity.** Chronic and acute toxicity testing shall be conducted within 3 months of initiation of discharge. For acute toxicity testing, the test species shall be rainbow trout (*Oncorhynchus mykiss*). See the Monitoring and Reporting Program (Attachment C) of the Limited Threat General Order for toxicity monitoring requirements. Annual monitoring shall be conducted in December each year.

Section II.B.2 of the Limitations and Discharge Requirements section of the Limited Threat General Order requires that dischargers submit new analytical results every 5 years for pollutants specified in Table I-1 of Attachment I. The Project is considered a Tier 2 discharge. Therefore, the Discharger shall submit monitoring results by **Fourth**

Quarter 2025 for the following constituents shown in Table 4 and subsequent Table 4 Notes, below:

Table 5. Effluent Characterization Monitoring

Parameter	Units	Sample Type
Biochemical Oxygen Demand	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Dissolved Oxygen	mg/L	Grab
Hardness	mg/L	Grab
pH	standard units	Grab
Temperature	°F	Grab
Electrical Conductivity @ 25 ºC	µmhos/cm	Grab
Total Dissolved Solids	mg/L	Grab
Turbidity	mg/L	Grab
Aluminum, Total Recoverable	µg/L	Grab
Iron, Total Recoverable	µg/L	Grab
Manganese, Total Recoverable	µg/L	Grab
CTR Priority Pollutants	See Attachment I, Table I-3 of the Limited Threat General Order	See Attachment I, Table I-3 of the Limited Threat General Order
Petroleum Fuel Pollution Constituents	See Attachment I, Table I-6 of the Limited Threat General Order	See Attachment I, Table I-6 of the Limited Threat General Order

Table 5 Notes

1. **For all parameters.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
2. **For DO, pH, electrical conductivity and temperature.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
3. **For hardness, lead, and zinc.** Monitoring for hardness shall be performed concurrently with sampling for lead and zinc.
4. **For CTR Priority Pollutants.** See Attachment I, Table I-3 of the Limited Threat General Order.

Receiving Water Monitoring - When discharging to surface water, the Discharger shall monitor the receiving water at RSW-001 and RSW-002, in accordance with Table C-5 of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 5 and subsequent Table 5 Notes:

Table 6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency
Electrical Conductivity @ 25 ºC	µmhos/cm	Grab	1/Month
pH	standard units	Grab	1/Month
Turbidity	NTU	Grab	1/Month
Hardness, Total (as CaCO3)	mg/L	Grab	1/Month
Temperature	° F	Grab	1/Month

Table 6 Notes

1. **For all parameters.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
2. **For pH and electrical conductivity.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Attention shall be given to the presence or absence of:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens, or coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the Monitoring Report.

Monitoring Report Submittals - Monitoring in accordance with the Limited Threat General Order shall begin upon initiation of discharge. Monitoring Reports shall be submitted to the Central Valley Water Board on a quarterly basis, beginning with the **Fourth Quarter 2020**. This report shall be submitted on **1 February 2021**. All Monitoring Reports shall specify the dates during the monitoring period the discharge did or did not occur. If monitoring samples were not obtained within 24 hours of initiation

of the discharge, the Discharger must document the reasons in the corresponding Monitoring Report. If treatment and discharge has not begun there is no need to monitor. However, a certified Monitoring Report must be submitted stating that there has been no discharge. Table 7, below, summarizes the Monitoring Report due dates required under the Limited Threat General Order. Quarterly Monitoring Reports must be submitted until your coverage is formally terminated in accordance with the Limited Threat General Order, even if there is no discharge during the reporting quarter.

Best Management Practices (BMP) Plan - Each Discharger with a treatment system (Tier 2 and Tier 3) authorized under this General Order shall develop and implement BMP's that include site-specific plans and procedures implemented and/or to be implemented to prevent the generation and potential release of additional pollutants from the discharge facility to waters of the State.

Table 7. Monitoring Periods and Reporting Schedule

Monitoring Period for All Sampling Frequencies	Quarterly Report Due Date
First Quarter (1 January through 31 March)	1 May
Second Quarter (1 April through 30 June)	1 August
Third Quarter (1 July through 30 September)	1 November
Fourth Quarter (1 October through 31 December)	1 February of the following year

GENERAL INFORMATION AND REQUIREMENTS

The Discharger must notify Central Valley Water Board staff within 24 hours of having knowledge of 1) the start of each new discharge, 2) noncompliance, and 3) when the discharge ceases. The Central Valley Water Board shall be notified immediately if any effluent limit violation is observed.

Discharge of material other than what is described in the application is prohibited. The required annual fee (as specified in the annual invoice you will receive from the State Water Resources Control Board) shall be submitted until this NOA is officially terminated. You must notify this office in writing when the discharge regulated by the Limited Threat General Order is no longer necessary by submitting the Request for Termination of Coverage (Attachment E). If a timely written request is not received, the Discharger will be required to pay additional annual fees as determined by the State Water Resources Control Board.

ENFORCEMENT

Failure to comply with the Limited Threat General Order may result in enforcement actions, which could include civil liability. Effluent limitation violations are subject to a Mandatory Minimum Penalty (MMP) of $3,000 per violation. In addition, late Monitoring Reports may be subject to MMPs or discretionary penalties of up to $1,000 per day late. When discharges do not occur during a quarterly monitoring period, the Discharger must still submit a quarterly certified Monitoring Report indicating that no discharge occurred to avoid being subject to enforcement actions.

COMMUNICATION

We have transitioned to a paperless office; therefore, please convert all documents to a searchable Portable Document Format (pdf). All documents, including Monitoring Reports, written notifications, and documents submitted to comply with this NOA and the Limited Threat General Order, should be submitted to the NPDES Compliance and Enforcement Unit, Attention: Michael Collins at centralvalleyredding@waterboards.ca.gov and michael.collins@waterboards.ca.gov. Mr. Collins may also be reached by phone at (530) 224-4785.

Please include the following information in the body of the email:

- Attention: NPDES Compliance Unit
- Discharger: Union Pacific Railroad Company
- Facility: Dunsmuir Railyard Project
- County: Siskiyou County
- CIWQS place ID: 220849

Documents that are 50 megabytes or larger must be transferred to a DVD, or flash drive and mailed to our office, attention “ECM Mailroom-NPDES".

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Links to the law and regulations applicable to filing petitions may be found on the Petitions Home Page (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

Original Signed by Bryan J. Smith (for)

Patrick Pulupa,
Executive Officer

Enclosures (2): Attachment A - Project Location Map
Monitoring Report Transmittal Form (Discharger only)

cc: Peter Kozelka, U.S. EPA, Region IX, San Francisco (email only)
Elizabeth Sablad, U.S. EPA, Region IX, San Francisco (email only)
Division of Water Quality, State Water Board, Sacramento (email only)
Sarah Torres, PG Environmental, Chantilly, Virginia (email only)

ATTACHMENT A – PROJECT LOCATION MAP

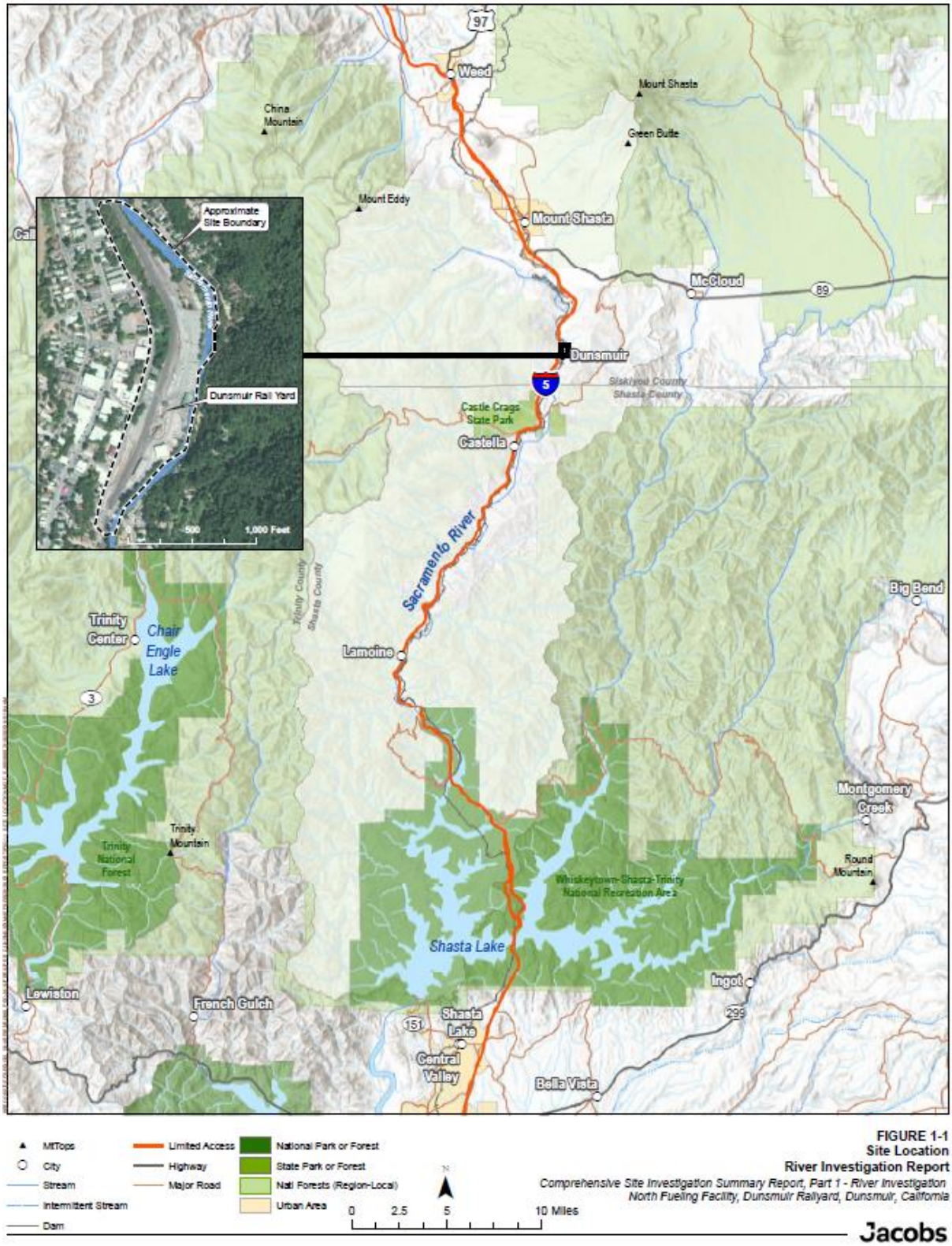

FIGURE 1-1
Site Location
River Investigation Report
Comprehensive Site Investigation Summary Report, Part 1 - River Investigation
North Fueling Facility, Dunsmuir Railyard, Dunsmuir, California

Jacobs